STATIC BUSTERS INC.
AS-1 STATIC DISCHARGER
INSTALLATION INFORMATION

Congratulations - You are installing a revolutionary new product for antenna noise reduction. The AS-1 has been engineered and field tested to deliver top performance. Follow these simple instructions to install and find out why "you can hear the difference".

Choosing a Location - Depending on the type of antenna, the optimum mounting location may vary. Keep in mind that the discharger will perform best when mounted in the most prominent D.C. field area that is exposed to the surrounding atmosphere. For example on a yagi , it would make little sense to mount the discharger in the center of the boom. The ends of the boom and elements are where the most discharging will occur.

YAGI MOUNTING - If mounting 2 dischargers on a horizontal yagi, the best location will be on the ends of the boom (fig.1). Two dischargers will yield better performance, one on each end of the boom. An additional noise improvement of 6-10 dB or more can be accomplished by installing a discharger on the ends of the elements. If mounting dischargers on the elements, the elements must be at D.C. ground potential (most are, for lightning protection). If the elements are isolated from the boom, you should add a 100k to 1 megohm resistor from element to boom to provide a path for discharging. This will not affect the antenna match or pattern in any way.

VERTICAL ANTENNAS - If mounting the AS-1 discharger to a vertical antenna, the discharger must extend above the top of the antenna. Again you want the discharger to be located in the most prominent D.C. field area (fig.2).

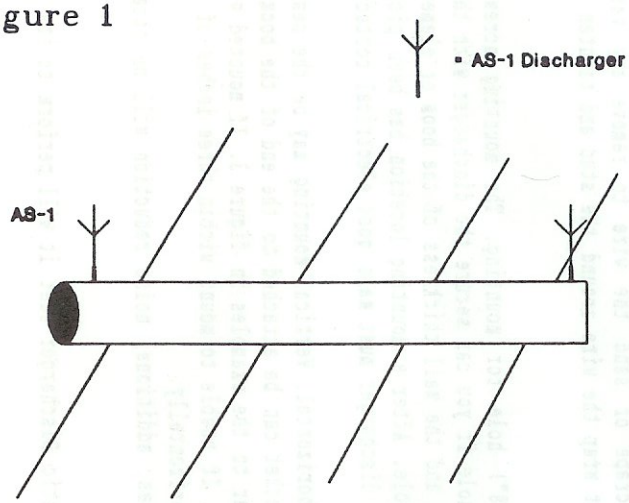
WIRE ANTENNAS - When mounting the AS-1 to a wire antenna (dipole, long wire, rhombic, etc.), optimum noise reduction will be obtained if the discharger is attached to the ends of the wire as shown in figure 4. After the location is chosen, remove 1/2 inch of insulation (if the wire is insulated), and scrape or sand the wire to remove any varnish or oxidization. The AS-1 can be attached to a wire with double nuts. Just wrap the wire around the stud and tighten down the nuts. It does not matter if the discharger wants to rotate downward.

MOUNTING - The AS-1 requires only a single # 4-40 tapped or (1/8") hole for mounting. The mounting screw is not self-tapping so the hole should be tapped. You can avoid tapping the hole if you can secure the discharger with the nut on the rear side of the 1/8" hole. Depending on the size of hole drilled and the wall thickness of the boom or elements, the discharger may be secure enough just screwed finger tight into the hole. After a mounting location has been picked, the area around the hole should be cleaned to remove any oxidization. The discharger must make good electrical contact to the boom or whatever it is attached.

As shown in figure 3, you can mount the discharger vertical or horizontal. Vertical mounting may be the best choice for booms with out an end cap. If mounting horizontal a small "L" bracket can be attached to the end of the boom and the discharger mounted as shown. The dischargers should be mounted similar to the examples in figure 3. If mounted vertical, the discharger should be as close as possible to the end of the boom. If unable to mount within three inches of the end, it is recommended that a bracket be used and the discharger mounted horizontally.

If any metal structure, tower or mast extends above the antennas, additional noise reduction will be obtained by placing a discharger there as well.

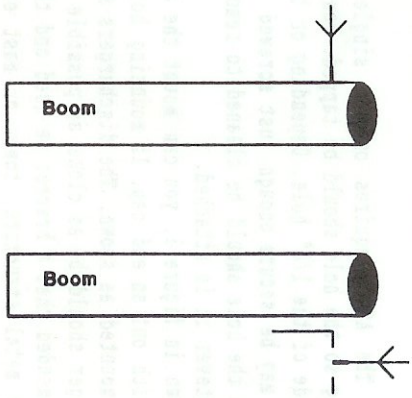
Figure 1



Yagi Mounting of AS-1

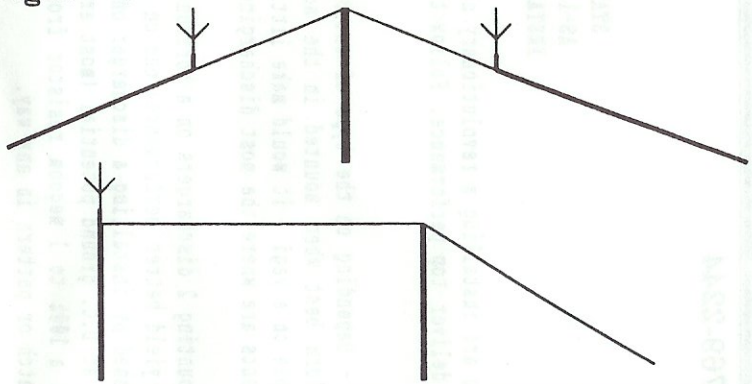
Figure 2

Figure 3



2 methods of mounting AS-1 to boom

Figure 4



Mounting for
Wire Antennas

AS-1 Mounting Details		
Scale-A	Drawn By: Mike Norton	Date: 09/15/90